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09/369,327 08/06/99 IWATA

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EXAMINER

CHANNAVA,ITALA, S

ART UNIT

PAPER NUMBER

2177
DATE MAILED:

07/03/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/369,327

Applicant(s)

IWATA ET AL.

Examiner

Srirama Channavajjala

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 36-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 36-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☒ Other: attachment to 948

DETAILED ACTION

Response to Amendment

1. Examiner acknowledges the applicant's amendment filed on 4/30/2001, paper no. 9.
2. Examiner acknowledges the applicant's amendment and supplemental response filed on November 20, 2000, paper no. # 6-7.
3. Claims 36-44 and 49 have been amended, paper no. # 9.
4. Claims 1-35 have been canceled, paper no. # 2.
5. Claims 36-48 have been added, paper no. # 2.
6. Claims 49-53 have been added, paper no. # 6
7. The preliminary amendment [paper no. # 2] filed on 8/6/1999 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on Application No. 08/918,106, filed on 8/27/97 is established. The parent Application No. 08/918,106, filed on 8/27/97 is now US Patent No. **5940289**.
8. In view of the Applicant's amendment, the rejection to Claims 49-53 under **35 USC § 112**, second paragraph as set in the previous office action, paper no. # 8 are hereby withdrawn.

Drawings

9. The Drawing filed on 8/6/1999, are objected to by the Draftsperson under 37CFR 1.84 or 1.152. [see PTO-948, paper no. # 4].

Priority

10. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 08/918,106, filed on 8/27/1997. [Japanese Patent Application No. 226406 filed on August 28, 1996].

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 36-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerull et al., [hereafter Gerull], US Patent No. 5426780.

12. As to Claim 36, Gerull details a system which including 'a data processing method in a database system' [see Abstract], specifically Gerull teaches for example a geographical information system stored in a relational database is equivalent to data processing in a database system; 'storing abstract data type(ADT) data including a plurality of attribute values in a database' [see Abstract, col 3, line 60-64, col 4, line 1-4, fig 1], Gerull teaches for example storing of attribute data values as detailed in col 4, line 1-4, also Gerull teaches for example changing or converting relational data into

object-oriented data as detailed in Abstract, col 2, line 55-67, more specifically, storing arrays with objects in a object oriented data structure such as shown in fig 1 is capable of storing abstract data types, therefore, abstract data types are inherent aspect of Gerull's teaching; 'referring to said database server and holding location information which indicates the location of said ADT data stored in said database' [col 6, line 43-67, col 7, line 43-46, line 47-58], examiner interpreting ADT to be equivalent to Gerull's Abstract data type as detailed in col 3, line 60-64; Gerull teaches for example reference system as detailed in col 6, line 43 through 67, specifically used for locating the distributed attributes and also given an example of typically database record as detailed in col 6, line 65 where attribute feature ID and reference marker id is detailed, also Gerull teaches dynamic segmentation is used for set of linear features which satisfy the conditions of a query, these linear features are segmented at respective locations; 'reading said attribute values using said location information and operating said attribute values;' [col 8, line 9-21], Gerull teaches for example loading and controlling of graphical data including linear features with attributes, also abstract class contains an attribute identifier such as detailed in col 8, line 19-20, attribute data will be read from the attribute table as detailed in col 8, line 24-25; 'attribute value contained in said ADT data located by said location information' [see col 8, line 24-28, line 50-67].

13. As to Claim 37, Gerull details a system which including 'ADT data retrieved is constituted by a plurality of partial data' [col 7, line 60-67], more specifically, Gerull details three basic operations such as loading relational database which including network and distributed attribute information, also control points with attributes as detailed in col 8, line 4-12, examiner interpreting retrieving data from object oriented model data structure is inherent aspect because Gerull teaches for example querying dynamic segmentation based on the conditions of a query as detailed in col 7, line 47-51], examiner interpreting partial data to be equivalent to portion(s) or segment of Gerull, 'attribute value including a name and data type declaration' see typical database record as detailed in col 6, line 65, col 7, line 15, 25, and 40, also Gerull specifically teaches for example objects are not restricted to standard data structures for values for example like in relational databases, therefore, in object oriented model using complex "c" type structures, and even function pointers as detailed in col 63-67.

14. The elements of Claim 38-42 are rejected in the analysis above in Claim 37, and these claims are rejected on that basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

15. Claims 43-44 are rejected under 35 U.S.C. 102(e) as being anticipated by

Lin et al., [hereafter Lin], US Patent No. 5590321.

16. As to Claims 43-44, Lin details a system which including 'database system' [see figs. 1-2, more specifically, element 102 is a heterogeneous distributed database system], 'inputting a query for data retrieval from a database' [see fig 3, element 310, fig. 4, element 410, more specifically fig 3, element 310 is an example of receive query to be equivalent to inputting a query], examiner interpreting Query is an inherent aspect of Lin's teachings because Lin specifically teaches for example SQL, also SQL concepts are well known in the art, see col 3, line 54-63, Lin's specifically teaches for example SQL query see Table 1, col 7, line 45-52, line 60-67; 'retrieving data including a plurality of partial data from said database based on a search condition and holding position information of retrieved data' [col 7, line 3-18, line 54-67], 'referencing said partial data of said retrieved data from said database on said position information' [col 8, line 35-47], examiner interpreting position information of a database is inherent aspect of Lin's teachings, because Lin specifically teaches function vector(s) in

relationship with the query or sub-query(s) and function vectors are checked against the function for a specific database instance for example fig. 2, element 110, therefore, referencing and position information is inherent aspect of Lin's invention, see col 9, line 29-35. 'plurality of servers' to be equivalent to Lin's fig 1, elements 108A-108C, col 5, line 48-51, 'network' to be equivalent to Lin's fig 2, element 238.

17. As to Claims 45-46, Lin details a system which including 'first server retrieves partial data items of said data from said second server based on said position information' [fig 1, elements 108A-108C are plurality of servers, col 4, line 23-27, col 6, line 13-16, line 51-55, col 7, line 25-27, col 8, line 37-47], 'dictionary information concerning locations of said partial data items' [col 9, line 29-35, line 42-45] , identifiers are inherent aspect of Lin's teachings because Lin suggested to use for example tables, catalog and index, see col 9, line 44-45, examiner interpreting dictionary to be equivalent to Lin's catalog, indexes, pointers and identifiers are well known in the art, for example in order to fast retrieval of records in search key or identifier order, records are chained together by pointers in a index structure, index schemes require to access an index structure to locate data, allows to find the address of a data item directly by computing a function on a identifier or search key value of the specific record.

18. Claims 49-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Carino, Jr. [hereafter Carino], US Patent No. 5754841.

19. As to Claim 49, Carino details a system which including 'a database system' [see fig. 2, col 4, line 10-13], 'a plurality of first servers which operate a database and which retrieve data from said database' [col 5, line 7-15, line 38-44], examiner interpreting database to be equivalent to Carino's RDBMS, fig 2, element 210, servers to be equivalent to fig 2, elements 212, 214, and 216; 'a second server connected to said first sever' [see fig. 2, server 212, 214, and 216 are connected though element 250 and all connected to the virtual network, element 208]; 'control and analyzes queries about said database, including a data retrieval query to retrieve data from selected ones' [col 5, line 20-24, col 5, line 58-65, col 9, line 14-18], examiner interpreting analyzing, retrieving data are inherent aspect of Carino's teachings because, Carino teaches specifically using RDBMS and SQL-3, see col 5 line 20-29; 'first servers, and a sub-data utilization query to retrieve only selected sub-data items from said data retrieved from a database' [col 7, line 55-60, 63-67, col 8 line 1-12], examiner interpreting selecting sub-data is inherent aspect of Carino's invention because, Carino teaches specifically SQL-3, used for querying and/or retrieving specific sub-data is well known in the art.

20. As to Claim 50, Carino details a system which including 'database operation contains sub-data items corresponding to attributes of an Abstract Data Type (ADT)' [col 10 line 58-67, col 11, line 23-31].

21. As to Claim 51, Carino details a system which including 'second server retrieves said sub-data items of said data from said selected ones of the first servers based on location information' [col 7, line 55-60, 63-67, col 8 line 1-12], examiner interpreting selecting sub-data is inherent aspect of Carino's invention because, Carino teaches specifically SQL-3, used for querying and/or retrieving specific sub-data is well known in the art., 'dictionary information concerning locations of said sub-data items within said data and sub-data identifiers ' [col 8 line 13-22, line 23-32], examiner interpreting dictionary information to be equivalent to Carino's Global data dictionary-GDD, element 313.

22. As to Claim 52, Carino details a system which including 'location information comprises an identifier of said selected ones of said first servers having retrieved said data and an address of said data' [col 17, line 24-26, line 43-45].

23. As to Claim 53, Carino details a system which including 'dictionary information of locations of said sub-data items within said data comprises offset values representing locations' [col 8 line 33-38], examiner interpreting dictionary information to be equivalent to Carino's Global data dictionary-GDD, element 313.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

24. Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al., [hereafter Lin], US Patent No. 5590321 as applied to claim 44 above, and further in view of Lomet, US Patent No. 5806065.

25. As to Claim 47, Lin details a system which including 'servers' see fig. 1, elements 108A-108C, also details database instances fig 1, elements 110A-110F are connected though the network, element 238, therefore, identifier of an individual server(s) are inherent aspect of Lin's teachings, however, Lin does not specifically detail 'data and an address'. Lomet details a system which including data and an address of said data within said server' [see col 1, line 47-52, col 9, line 27-33, line 51-53, line 61-67].

It would have been obvious one of the ordinary skill in the art at the time of the applicant's invention to combine the concepts taught by Lomet with the system of Lin because retrieved data with the specific address or location allows users to specifically update a particular data or data(s) , also ensures the proper access to the data in a heterogeneous distributed multi-database system as detailed [see Lin fig 1-2], bringing the advantages of multi-processing, quicker response and greater responsibility to distributed data management system [see Lomet col 10 line 24-28], improving the reliability and versatility of the system.

26. As to Claim 48, Lin details a system which including 'dictionary information of location ' [col 9, line 42-45], examiner interpreting dictionary to be equivalent to Lin's catalog, indexes, pointers and identifiers are well known in the art, for example in order to fast retrieval of records in search key or identifier order, records are chained together by pointers in a index structure, index schemes require to access an index structure to locate data, allows to find the address of a data item directly by computing a function on a identifier or search key value of the specific record, 'partial data items with in said data' [col 10, line 40-43, line 54-57], examiner interpreting partial data items are the result of Lin's subqueries. Lomet details more specifically database element 60 in a tree index file structure element 62 having data nodes element 64 as detailed in col 9, line 51-53, examiner interpreting clustered within said data to be equivalent to Lomet's tree index file structure, also Lomet details data page in a memory with pointer to the addresses as detailed in col 9, line 61-67.

Response to Arguments

27. Applicant's arguments in the paper no. # 8, filed on December 12, 2000 with respect to Claims 21-33 have been fully considered but they are not deemed to be persuasive. For the Examiner's response to the Applicant's arguments, see the discussion given below:

28. Claims 36-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Gerull et al., [hereafter Gerull], US Patent No. 5426780.

29. Claims 43-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al., [hereafter Lin], US Patent No. 5590321., in the previous office action, examiner addresses the elements of the claims, and thus the rejection of the previous action is maintained, for the claims as amended.

30. Claims 49-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Carino, Jr. [hereafter Carino], US Patent No. 5754841, in the previous office action, examiner addresses the elements of the claims, and thus the rejection of the previous action is maintained, for the claims as amended.

31. Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al., [hereafter Lin], US Patent No. 5590321 as applied to claim 44 above, and further in view of Lomet, US Patent No. 5806065. Lin and Lomet are prior art of record, was applied in the previous office action [paper no. # 8]. The rejection of Claims 47-48 in the previous action addresses the elements of dependent Claims, and thus the rejection of the previous action is maintained, for the above claims.

It is the Examiner's position that Applicant has yet to provide the true detailed functionality of Applicant's invention within the Claim language. Eventhough it is Applicant's right to Claim as broadly as possible their invention. It is also the Examiner's right to interpret the Claim language as broadly as possible. It is advised that, in order to further expedite the prosecution of the application in response to this action, Applicant should amend the base claims to describe in more narrow detail the true distinguishing features of the Applicant's claimed invention. It is also the position of the Examiner that the detailed functionality that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique. As it is extremely well known in the database art as already shown in each of the prior arts used in the rejection as well as numerous other cited prior art. The Abstract data type or user defined data types in a database is notoriously well known.

Conclusion

The prior art made of record

- a. US Patent No. 5754841
- b. US Patent No. 5590321
- c. US Patent No. 5806065
- d. US Patent No. 5426780

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

- e. US Patent No. 5999924
- f. US Patent No. 5729730
- g. US Patent No. 5940289
- h. US Patent No. 5930800
- i. US Patent No. 5878409
- j. Lai F. Et al., A new general purpose parallel database system,
IEEE 1997
- k. Welch, L.R. A parallel virtual machine for programs composed of
Abstract data types, IEEE , 1994.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is (703)308-8538. The examiner can normally be reached on Monday-Friday from 7:30 AM to 4:00 PM Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (703)305-9790. The fax phone number for this Art Unit is (703)308-6606.

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)305-9600.

CS 

June 22, 2001.


JOHN BREENE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100